From: Henderson, Kim/SDO <Kimberly.Henderson@jacobs.com>
Sent: Wednesday, May 29, 2019 7:22 AM
To: Roddy, Elizabeth A CTR USN (USA)
Cc: Larson, Leo M CTR (USA); Stoick, Paul T CIV USN (USA)
Subject: [Non-DoD Source] RE: Parcel G RAWP Comments from DTSC
Attachments: [EXTERNAL] FW: HPNS Parcel G Dust Action Levels for Radiological Rework; Regulator RTCs_Draft Final Parcel G WP_051319.pdf; Regulator RTCs_Parcel G Work Plan_101118 _rev103018.pdf

Hi Liz,
I Think the attached email may be what you are looking for? If so, I have not drafted a response to this comment. I also attached the previous sets of comments and RTCs on the work plan that include DTSC's.
Let me know if you need anything else!
Thanks,

Kim Henderson, PG, LEED GA
Project Manager
D 1 619 272 7209
M 1 757 513 6632

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www.jacobs.com

From: Roddy, Elizabeth A CTR USN (USA) <elizabeth.roddy.ctr@navy.mil>
Sent: Tuesday, May 28, 2019 4:46 PM
To: Henderson, Kim/SDO <Kimberly.Henderson@jacobs.com>
Cc: Larson, Leo M CTR (USA) <leo.m.larson.ctr@navy.mil>; paul.stoick@navy.mil
Subject: [EXTERNAL] Parcel G RAWP Comments from DTSC

Kim,

Would you be able to send me the comment and response related to the DTSC request to implement the HERO action levels within Parcel G? Thanks!

Very Respectfully,

Liz Roddy
NAVFAC BRAC PMO West
33000 Nixie Way
Bldg 50, 2nd Floor
San Diego, CA 92147
(619) 524-5755
elizabeth.roddy.ctr@navy.mil

From: paul.stoick@navy.mil
Sent: Wednesday, May 15, 2019 1:50 PM
To: Henderson, Kim/SDO; 'Bercik, Lisa M.'
Cc: Roddy, Elizabeth A CTR USN (USA); Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA)
Subject: [EXTERNAL] FW: HPNS Parcel G Dust Action Levels for Radiological Rework
Attachments: HERO Dust Action Levels Parcel G 2019.03.05.pdf
Signed By: paul.stoick@fe.navy.mil

Kim,

We may need to update the RTC for air monitoring in the Jacobs WP RTC to reflect the specifics in the addendum. I'll ask Nina if that is her concern, and also explain the comment received in December came before we had the addendum prepared, which is why the response defers to the addendum.

V/r,
Paul

From: Bacey, Juanita@DTSC <Juanita.Bacey@dtsc.ca.gov>
Sent: Wednesday, May 15, 2019 1:17 PM
To: Stoick, Paul T CIV USN (USA) <paul.stoick@navy.mil>
Cc: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1@navy.mil>; LEE, LILY (LEE.LILY@EPA.GOV) <LEE.LILY@EPA.GOV>; Sanchez, Yolanda <Sanchez.Yolanda@epa.gov>
Subject: [Non-DoD Source] FW: HPNS Parcel G Dust Action Levels for Radiological Rework

Hi Paul,
I'm resending this email with DTSCs comment regarding DTSC dust action levels for the Parcel G radiological rework. The RTCs on the draft final Parcel G Removal Site Evaluation Work Plan (Work Plan) that we received on May 13, 2019, did not address this comment. If you have any questions, please feel free to contact me.

Nina

From: Bacey, Juanita@DTSC
Sent: Wednesday, March 06, 2019 11:32 AM
To: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO <derek.j.robinson1@navy.mil>
Cc: Stoick, Paul T CIV NAVFAC SW <paul.stoick@navy.mil>; Amy.Brownell@sfdph.org; LEE, LILY <LEE.LILY@EPA.GOV>; Low, Tina@Waterboards <Tina.Low@waterboards.ca.gov>
Subject: HPNS Parcel G Dust Action Levels for Radiological Rework

Hi Derek,
I'm following up on our discussion from last week. Per DTSC's comment on the draft Parcel G Removal Site Evaluation Work Plan, DTSC is requesting dust action levels be used when conducting dust monitoring at Parcel G for the radiological rework. Monitoring should be conducted on the perimeter fenceline closest to the nearby residential areas to ensure they are not impacted from fieldwork activities and, that dust suppression methods are used if dust action levels are exceeded. Real-time monitoring should occurr frequently throughout the day (e.g., every two hours), and can easily be accomplished with portable dust monitoring

devices (e.g., miniRAM, personal data real-time aerosol monitors). Additionally, DTSC requests weekly data be submitted to us as has been done during fieldwork activities at Parcel E-2.

As we discussed, DTSC would develop the PM10 dust action levels based on the maximum concentrations of contaminants found in soil at Parcel G. Our Human and Ecological Risk Office has determined the appropriate dust action levels. Please see the attached memorandum. If you have any questions, please feel free to contact me.

Nina Bacey
Project Manager
(510) 540-2480

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

TO: Nina Bacey, Project Manager
Site Mitigation and Restoration Program
700 Heinz Avenue, Suite 200C
Berkeley, CA 94710

FROM: Kimberly C. Gettmann, Ph.D.
Staff Toxicologist, Human and Ecological Risk Office (HERO)

DATE: March 5, 2019

SUBJECT: DRAFT DUST ACTION LEVELS FOR PARCEL G, HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA.

PCA: 14718 Site: 200050-47 EnviroStor #WR20056383

DOCUMENT REVIEWED AND BACKGROUND: HERO was asked to develop dust action levels for community air monitoring for Parcel G, Hunters Point Naval Shipyard, San Francisco, California by the DTSC Project Manager, Nina Bacey. HERO received the request on February 20, 2019.

SCOPE OF REVIEW: To address concern regarding potential contaminated dust to any nearby residents and visitors during the forthcoming excavation at Parcel G and per the request of the DTSC Project Manager, HERO calculated acute, subchronic and chronic dust action levels as PM_{10} (particulate matter 10 micrometers or less in diameter) for community air monitoring. The action levels were calculated for the following chemicals: benzo(a)pyrene, arsenic, chromium hexavalent, cobalt, and manganese. HERO's calculated dust action levels, the rationale and method of our calculation is discussed below in this memorandum.

DEVELOPMENT OF RISK-BASED DUST ACTION LEVELS

HERO calculated the following dust action levels: 1) an acute (4-hour) dust action level for arsenic; 2) subchronic (8-hour) dust action levels for arsenic, chromium VI (particulates), and manganese; and 3) chronic dust action level for benzo(a)pyrene and cobalt. The results were reported then as PM_{10} action levels. Ideally HERO would have calculated acute dust action levels for all chemicals of concern; however, an acute toxicity criterion is only available is for arsenic. To calculate the dust action levels, HERO used the maximum detected soil concentration at Parcel G provided by the DTSC Project Manager. The soil concentrations used are listed below in Table 1.

The Bay Area Air Quality Management District (BAAQMD) regulatory limit for total PM_{10} (uncontaminated and contaminated particulates) is 50 µg/m^3 (http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status).

HERO used the acute (4-hour) and subchronic (daily 8-hour) reference exposure level (RELs) from the Office of Environmental Health Hazard Assessment (OEHHA) for arsenic (0.2 µg/m^3 and 0.015 µg/m^3, respectively), and OEHHA subchronic REL for manganese (0.17 µg/m^3). HERO used the Agency for Toxic Substances and Disease Registry (ATSDR) intermediate (15 to 364 days) minimal risk level (MRL) for chromium VI (0.03 µg/m^3). For cobalt, HERO used the chronic ATSDR inhalation MRL (0.1 µg/m^3). For benzo(a)pyrene, HERO used the USEPA chronic reference concentration (RfC) (2E-03 µg/m^3).

Acute Calculations

For the acute evaluation, the PM_{10} action level is calculated by dividing the chemical-specific REL by the metal concentration in soil as shown below:

$$PM10\ Action\ Level\ \left(\frac{ug\ dust}{m3}\right) = \frac{Acute\ (REL)\frac{ug}{m3} x\ Conversion\ factor\ (1E{-}03\frac{mg}{ug})}{Soil\ Concentration\left(\frac{mg\ chemical}{kg\ soil\ or\ dust}\right) \times Conversion\ Factor\ (1E{-}9\ kg/ug)}$$

Subchronic and Chronic Calculations

For the subchronic and chronic evaluation, the PM_{10} action level is calculated by the following equation:

$$PM10\ Action\ Level\ \left(\frac{ug}{m3}\right) = \frac{Subchronic\ or\ Chronic\ REL, RfC, MRL\ \left(\frac{ug}{m3}\right) x\ Conversion\ factor\ (1E-03\frac{mg}{ug})}{Soil\ Concentration\ \left(\frac{mg}{kg}\right) \times Conversion\ Factor\ \left(1E-9\frac{kg}{ug}\right)} \times \frac{24\ hours}{8\ hours} \times \frac{7\ days}{5 days}$$

During the excavation, exposure to respirable dust could occur for 40 hours per week (8 hours per day for 5 days per week) for approximately 5 months.

The PM_{10} action levels are shown in Table 2.

Table 1. Soil Concentrations.

Chemical of Concern	Maximum Soil Concentration (mg/kg)
Arsenic	24
Benzo(a)pyrene	0.3
Chromium VI	4.9
Cobalt	383
Manganese	8770

Table 2. PM_{10} Dust Action Levels.

Chemical of Concern	Action Levels Based on Maximum Detected Soil Concentration		
	Acute Dust Action Level ($\mu g/m^3$)	Subchronic Dust Action Level ($\mu g/m^3$)	Chronic Dust Action Level ($\mu g/m^3$)
Arsenic	8.3E+03	2.6E+03	--
Benzo(a)pyrene	--	--	2.8E+04
Chromium VI	--	2.6E+05	--
Cobalt	--	--	1.1E+03
Manganese	--	8.1E+01	--

"--" = Toxicity Criteria not available and a dust action level could not be calculated.

CONCLUSIONS

HERO calculated acute, subchronic and chronic dust action levels as PM_{10} for the soil excavation at Parcel G, Hunters Point Shipyard for arsenic, benzo(a)pyrene, chromium VI (particulates), cobalt and manganese. The calculated action levels for contaminated dust are above the BAAQMD regulatory limit for total PM_{10} of 50 $\mu g/m^3$ as shown in Table 2. **Therefore, compliance with the BAAQMD regulatory limit 50 $\mu g/m^3$ for total PM_{10} would be protective for all chemicals found in soil at Parcel G.**

Internal HERO Review: B. Renzi
Barbara Renzi, M.S.
Associate Toxicologist, DSMOA Unit HERO – Cal Center

Concur:
Thomas F. Booze, Ph.D.,
Senior Toxicologist, DSMOA Unit HERO – Cal Center

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